UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/585,785	07/11/2006	David J. Chatting	36-1995	1418

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EXAMINER
CHOW, JEFFREY J

ART UNIT	PAPER NUMBER
2628	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

	Application No.	Applicant(s)
Office Action Summary	10/585,785	CHATTING ET AL.
	Examiner	Art Unit
	Jeffrey J. Chow	2628

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on <u>13 August 2008</u>.

2a) ☐ This action is **FINAL**.   2b) ☒ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) <u>2-10 and 12-23</u> is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) <u>2-10 and 12-23</u> is/are rejected.

7) ☐ Claim(s) _____ is/are objected to.

8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.

10) ☒ The drawing(s) filed on <u>11 July 2006</u> is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a) ☐ All   b) ☐ Some * c) ☐ None of:

      1. ☐ Certified copies of the priority documents have been received.

      2. ☐ Certified copies of the priority documents have been received in Application No. _____.

      3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

Applicant's arguments with respect to claims 2 – 10 and 12 – 18, filed 13 August 2008,

have been fully considered and are persuasive. Therefore, the rejection has been withdrawn.

However, upon further consideration, a new ground(s) of rejection is made.

Claim Rejections - 35 USC § 101

35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or
> any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and
> requirements of this title.

Claims 2 – 8 and 19 – 22 are rejected under 35 U.S.C. 101 s not falling within one of the

four statutory categories of invention. Based on Supreme Court precedent and recent Federal

Circuit decisions, a statutory "process" under 35 U.S.C. 101 must (1) be tied to another statutory

category (such as a particular apparatus), or (2) transform underlying subject matter (such as an

article or material) to a different state or thing. The instant claims neither transform underlying

subject matter nor positively tie to another statutory category that accomplishes the claimed

method steps, and therefore do not qualify as a statutory process. For instance, the recited steps

could be performed manually, without the use of a particular thing or product of another

statutory class.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 20 and 22 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Claims 20 and 22 recite, "a caricature weighting factor which increases as a function of the number of persons included in the group". The original specification discloses the weighting factor increases in time (page 13, line 33 – page 14, line 22 and Figure 2). Though one new person may join the group, the addition of the new person does not cause the caricature weighting factor new user to increase. In fact, when the weighting factor of the new user increases, the weight of the new user has on the mean face is increased. The weight of the new user has on the mean face is capped by the function of the number of people, but the weighting factor of the new user only increase in time. Therefore, said limitation in claims 20 and 22 is considered new matter.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 2 – 10 and 12 – 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fujiwara[1] et al. ("Web-PICASSO: Internet Implementation of Facial Caricature System PICASSO", 2000, pages 151-159) in view of Fujiwara[2] et al. ("Age and gender estimation by modeling statistical relationship among faces", 2003, pages 559 – 566).

Regarding independent claim 12, Fujiwara[1] teaches a system for generating caricatured images (title: Facial Caricature System PICASSO), said system comprising

storage means arranged in use to store image representations of subjects (page 155, section 3.2: provided face image data are stored in Web-PICASSO system) and corresponding respective caricatured image representations of the subjects (page 154, section 3.1: generate the facial caricature),

input means for receiving an image representation of a new subject (page 155, section 3.2: face image data can be acquired through the input channel of the PICASSO system).

Fujiwara[1] did not expressly disclose processing means arranged in use to generate replacement caricatured image representations of the subjects in dependence on the stored image

representations thereof and the received image representation of the new subject, however

Fujiwara[1] does disclose creating a new caricature, Q, based on the mean face, S, and the input

face, P, (pages 152 and 153, sections 2.1) and further realized that different caricature face for

input face, P, is generated, Q and Q', by different mean face, S and S', respectively (page 152,

section 2.2). Fujiwara[2] discloses the mean face, S, is defined by averaging input faces (page 559,

section 2). It would have been obvious for one of ordinary skill in the art at the time of the

invention to modify Fujiwara[1]'s system to include the new input image, P, into the mean face, S,

as taught by Fujiwara[2]. One would be motivated to do so because this would provide the most

up-to-date mean face. It would have also been obvious for one of ordinary skill in the art at the

time of the invention to modify Fujiwara[1]'s system to update caricature information of each user

in the system when a new mean face is obtained, where one of ordinary skills in the art would

achieve a predictable result of updating caricature information of each user in the system when a

new mean face is obtained because, knowing that Fujiwara[1] realized that a different caricature

face for an input P would be generated based on different mean face, Q or Q', one of ordinary

skill in the art using common sense would also realize that the caricature information for each

user is out-of-date when a new mean face is obtained and therefore would logically want to

update the caricature information for each user with the newly obtained mean face.

Regarding dependent claim 13, Fujiwara[1] teaches the processing means is further

arranged to generate a caricatured image representation of the new subject in dependence on the

stored image representations of the subjects and the received image representation of the new

subject (pages 152 and 153, sections 2.1: creating a new caricature, Q, based on the mean face, S, and the input face, P).

Regarding dependent claim 14, Fujiwara[1] did not expressly disclose the processing means is further arranged to generate the caricatured image representations in weighted dependence on the received image representation of the new subject, however Fujiwara[1] does disclose creating a new caricature, Q, based on the mean face, S, and the input face, P, (pages 152 and 153, sections 2.1) and further realized that different caricature face for input face, P, is generated, Q and Q', by different mean face, S and S', respectively (page 152, section 2.2). Fujiwara[2] discloses the mean face, S, is defined by averaging input faces (page 559, section 2). It would have been obvious for one of ordinary skill in the art at the time of the invention to modify Fujiwara[1]'s system to include the new input image, P, into the mean face, S, as taught by Fujiwara[2]. One would be motivated to do so because this would provide the most up-to-date mean face. It would have also been obvious for one of ordinary skill in the art at the time of the invention to modify Fujiwara[1]'s system to update caricature information of each user in the system when a new mean face is obtained, where one of ordinary skills in the art would achieve a predictable result of updating caricature information of each user in the system when a new mean face is obtained because, knowing that Fujiwara[1] realized that a different caricature face for an input P would be generated based on different mean face, Q or Q', one of ordinary skill in the art using common sense would also realize that the caricature information for each user is out-of-date when a new mean face is obtained and therefore would logically want to update the caricature information for each user with the newly obtained mean face.

Fujiwara[1] did not expressly disclose a weighting factor associated with the new image

representation generally increases with time, and

the caricature image representations are regenerated each time the weighting factor is

adapted, however Fujiwara[1] does disclose creating a new caricature, Q, based on the mean face,

S, and the input face, P, (pages 152 and 153, sections 2.1) and further realized that different

caricature face for input face, P, is generated, Q and Q', by different mean face, S and S',

respectively (page 152, section 2.2) and using a weight factor, b, to create a new caricature, Q, of

input face, P, (page 152, section 2.1). Fujiwara[2] discloses the mean face changes though age

(page 564, section 4.3 and Figure 7) and the mean face, S, is defined by averaging input faces

(page 559, section 2). It would have been obvious for one of ordinary skill in the art at the time

of the invention to modify Fujiwara[1]'s system to update caricature information of each user in

the system when a new mean face is obtained, where one of ordinary skills in the art would

achieve a predictable result of updating caricature information of each user in the system when a

new mean face is obtained because, knowing that Fujiwara[1] realized that a different caricature

face for an input P would be generated based on different mean face, Q or Q', one of ordinary

skill in the art using common sense would also realize that the caricature information for each

user is out-of-date when a new mean face is obtained and therefore would logically want to

update the caricature information for each user with the newly obtained mean face. It would

have also been obvious for one of ordinary skill in the art at the time of the invention to adjust

the mean face based on age, as taught by Fujiwara[2]. One would be motivated to do so because

this would produce the most up-to-date mean face. Examiner notes that combination explained

above factors the new image input in the mean face and therefore reads on the claimed a

weighting factor associated with the new image representation generally increases with time.

Regarding dependent claim 15, Fujiwara[1] teaches the subjects form a closed group of

subjects, and the system is operated whenever a new subject joins the closed group (page 155,

section 3.2: face image data can be acquired through the input channel of the PICASSO system).

Regarding independent claim 16, Fujiwara[1] teaches a system for generating caricatured

images (title: Facial Caricature System PICASSO), said system comprising

storage means arranged in use to store image representations of subjects (page 155,

section 3.2: provided face image data are stored in Web-PICASSO system) and corresponding

respective caricatured image representations of the subjects (page 154, section 3.1: generate the

facial caricature).

Fujiwara[1] did not expressly disclose means for receiving a leave signal indicating a

particular one or more of the subjects for which image representations are stored. Examiner

takes Official Notice that the concept of subscribing and unsubscribing system with images

associated to each user and the advantage of maintaining current users in the system are well

known and expected in the art. It would have been obvious for one of ordinary skill in the art at

the time of the invention to modify Fujiwara[1]'s system to incorporate a subscribing and

unsubscribing system where users can freely add and leave a system. One would be motivated to

do so because this would maintain current users in the system.

Fujiwara[1] did not expressly disclose processing means arranged in use to generate

replacement caricatured image representations in dependence on the stored image representations

of the subjects but at least partially discounting the image representations of the indicated

subjects, however Fujiwara[1] does disclose creating a new caricature, Q, based on the mean face,

S, and the input face, P, (pages 152 and 153, sections 2.1) and further realized that different

caricature face for input face, P, is generated, Q and Q', by different mean face, S and S',

respectively (page 152, section 2.2). Fujiwara[2] discloses the mean face, S, is defined by

averaging input faces (page 559, section 2). It would have been obvious for one of ordinary skill

in the art at the time of the invention to modify Fujiwara[1]'s system to include the new input

image, P, into the mean face, S, as taught by Fujiwara[2]. One would be motivated to do so

because this would provide the most up-to-date mean face. It would have also been obvious for

one of ordinary skill in the art at the time of the invention to modify Fujiwara[1]'s system to update

caricature information of each user in the system when a new mean face is obtained, where one

of ordinary skills in the art would achieve a predictable result of updating caricature information

of each user in the system when a new mean face is obtained because, knowing that Fujiwara[1]

realized that a different caricature face for an input P would be generated based on different

mean face, Q or Q', one of ordinary skill in the art using common sense would also realize that

the caricature information for each user is out-of-date when a new mean face is obtained and

therefore would logically want to update the caricature information for each user with the newly

obtained mean face. Examiner notes that when a user leaves the system, this effectively changes

the mean face and therefore provides a new mean face.

Regarding independent claims 2 and 6 and dependent claims 3 – 5, 7, 8, 17, and 18,

claims 2 – 8, 17, and 18 are similar in scope as to claims 12 – 16, thus the rejections for claims

12 – 16 hereinabove is applicable to claims 2 – 8, 17, and 18.

Regarding independent claim 9, Fujiwara[1] teaches a tangible storage medium containing

a computer program or suite of computer programs arranged such that when executed by a

computer system causes the computer system to perform (abstract: web-PICASSO system).

Regarding independent claim 10, Fujiwara[1] teaches a computer readable storage medium

storing a computer program or at least one of the suite of computer programs which, when

executed by a computer (abstract: web-PICASSO system).

Regarding independent claim 19, claim 19 is similar in scope as to claim 12, thus the

rejection for claim 12 hereinabove is applicable to claim 19. Fujiwara[1], along with the

modification of Fujiwara[1]'s system explained above, teaches displaying said replacement set of

caricatured second facial images to represent a new group of persons now including said new

person (page 153, Figure 2: caricature Q displayed and Q' displayed corresponding to their

respective mean face, S and S').

Regarding dependent claim 20, Fujiwara[1] did not expressly disclose (as explained in the

original specification) said generating of caricatured facial images utilizes a caricature weighting

factor which increases as a function of the number of persons included in the group, however

Fujiwara[1] does disclose using a weight factor, b, to create a new caricature, Q, of input face, P, (page 152, section 2.1). Fujiwara[2] discloses the mean face changes though age (page 564, section 4.3 and Figure 7). It would have been obvious for one of ordinary skill in the art at the time of the invention to adjust the mean face based on age, as taught by Fujiwara[2]. One would be motivated to do so because this would produce the most up-to-date mean face. Examiner notes that combination explained above factors the new image input in the mean face and therefore reads on the claimed a weighting factor associated with the new image representation generally increases with time.

Regarding dependent claim 21, claim 21 is similar in scope as to claim 16, thus the rejection for claim 16 hereinabove is applicable to claim 21. Fujiwara[1], along with the modification of Fujiwara[1]'s system explained above, teaches displaying said another replacement set of caricatured second facial images to represent the remaining group of persons (page 153, Figure 2: caricature Q displayed and Q' displayed corresponding to their respective mean face, S and S').

Regarding dependent claim 22, claim 22 is similar in scope as to claim 20, thus the rejection for claim 20 hereinabove is applicable to claim 22.

Regarding dependent claim 23, Fujiwara[1] teaches a tangible storage medium containing computer program code which, when executed by a computer (abstract: web-PICASSO system).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jeffrey J. Chow whose telephone number is (571)-272-8078. The examiner can normally be reached on Monday - Friday 10:00AM - 5:00PM (EST).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ulka Chauhan can be reached on (571)-272-7782. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

JJC

/Ulka Chauhan/

Supervisory Patent Examiner, Art Unit 2628